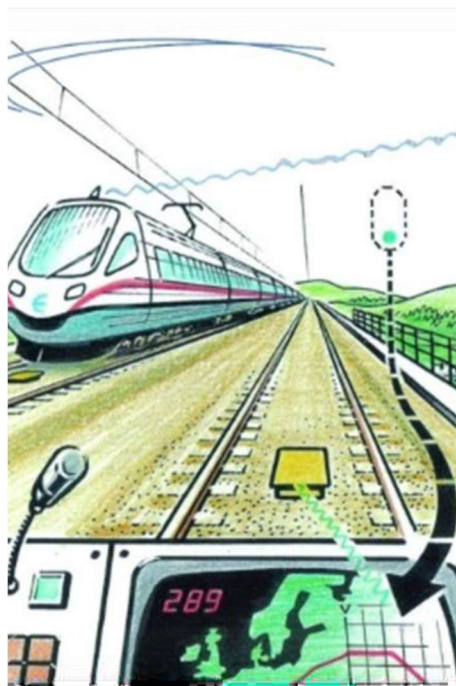


Public Report - Market consultation

ERTMS – Towards a future-proof Key Management System (KMS)



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Table of contents

1	Introduction of the market consultation ERTMS Future-proof Key Management System (KMS)	3
1.1	Objective and market consultation process	3
1.2	Object of this report	3
1.3	Rules of the market consultation	3
2	Outline of the result(s)	4
2.1	Key Management System	4
2.1.1	KMC Solution	4
2.1.2	System Requirements (including ERTMS subsets 38, 114 and 137)	4
2.1.3	Development & Delivery time	4
2.1.4	Maintenance & Support	4
2.1.5	Security	5
Annex 1	Rules of the market consultation	6

1 Introduction of the market consultation ERTMS Future-proof Key Management System (KMS)

1.1 Objective and market consultation process

The market consultation ERTMS KMS was organised by a collaboration between, ProRail, NS and other railway operators (hereafter: initiators) between the period April 2020 and July 2020. ProRail is the operator of the railway infrastructure in the Netherlands. NS is the principal passenger railway operator in the Netherlands and provides rail services on the Dutch main rail network.

The market consultation had as primary goal for initiators to gain insight into all possibilities for acquisition of a Key Management Center Solution (KMC Solution) resulting in a ERTMS future-proof Key Management System. ERTMS stands for European Rail Traffic Management System and is the European standard for train protection. Systems based on this standard will serve as a replacement for the current ATB (Automatic Train Protection) system. The advantages of ERTMS lie in the areas of safety and interoperability, as well as in capacity, speed and reliability.

Initiators asked market players to provide answers on defined questions relating to the subject KMC Solution for a future-proof KMS for ERTMS. This particularly concerned aspects relating to the understandability and feasibility of the requested solution.

This market consultation plays an important part in the (further) preparation for the acquisition of an ERTMS future proof KMC. To this end, a market consultation document was drawn up with a number of questions regarding the various subjects. The market consultation was announced on TenderNed per 22th of April 2020.¹ Based on the responses, some of the market parties were invited to participate in more in-depth discussions between end of June 2020 and beginning of July 2020. In total, six market parties took part in the dialogues. The object of these individual discussions was to seek further clarification on the parties replies to the questions put to them. More secondary items were also discussed at these meetings.

1.2 Object of this report

The object of this report is twofold. Firstly, in this report, initiators are sharing the results of the market consultation with the market. These results are presented in a broad and anonymous manner in order to safeguard the confidentiality of information received from the market players. Secondly, the information that was shared by initiators in the dialogue with the market will be passed on in this report to all the parties so as to guarantee a level playing field.

1.3 Rules of the market consultation

In the market consultation document, the rules governing confidentiality and a level playing field for the market consultation have been shared with the market. These rules are also set out in Annex 1 of this report.

¹ <https://www.tenderned.nl/tenderned-tap/aankondigingen/193265>

2 Outline of the result(s)

2.1 Key Management System

2.1.1 KMC Solution

Many of the (market) parties stated that there are standard products on the market for a KMC solution that can be introduced for initiators and are fit for purpose with adaptation to the specific needs and requirements.

Most of the parties stated that development of a KMC solution is also an alternative in this case.

Several parties see possibilities in delivering Key Management as a complete service solution including hosting, maintenance and operations.

Most of the parties do not supply field service engineering.

2.1.2 System Requirements (including ERTMS subsets 38, 114 and 137)

Several parties stated to have an available product and/or solution for a KMC solution, meeting up to the system Requirements and already in use and or delivered to customers.

Most of the parties stated to have a KMC solution which can be either developed or adjusted with the necessary system requirements.

Several parties acknowledge the existence of the ERTMS subset requirements for the KMC solution. Several parties provided conditional answers on this topic, for which further dialogue seemed necessary regarding the system boundaries.

2.1.3 Development & Delivery time

Several parties stated that the expected development time for a KMC Solution is somewhere between six and 18 months, pending on specific functionality and processes.

Several parties stated that the expected (initial) delivery time for a KMC Solution is somewhere between nine and 36 months, pending on specific functionality and processes.

2.1.4 Maintenance & Support

Most of the parties can provide technical maintenance, software maintenance, support and service desk-based maintenance for the desired KMC Solution.

Most of the parties can provide a long-term support (20 yrs.+) for their KMC Solution.

2.1.5 Quality, Releases, Updates & Changes

Most of the parties ensure the level of quality for their solution based on a quality management system (ISO 9001 or sort like) with description of procedures for project management, development and maintenance.

Several parties confirmed the necessity of proper Change- and Release management into place for this type of systems. Several parties offered additional services amongst others: frequent standard releases, midlife upgrade, migration services and support to additional functionality.

2.1.6 Security

Several parties confirm the importance of cyber security for systems like a KMC. A majority of these parties provide several security measures within the KMC solution, amongst others:

- Secure key management activities and on-line key distribution;
- Secure communication to the system with https connection;
- Use of a Hardware Security Module (HSM) for secure key storage;
- Separation between security critical and non-security critical components;
- Data security by cryptographically secure random number generators;
- Cyber events logging.

Annex 1 Rules of the market consultation

Initiators have set out the following conditions pertaining to this market consultation:

- This market consultation is explicitly not part of the possible procurement procedure that may follow;
- Expressly no rights may be derived from the information that is provided for the purpose of the market consultation;
- As a result of participating in this market consultation, participants will not be given any preferential status with respect to the possible procurement procedure, nor will participation lead to exclusion from such a possible procedure;
- The market consultation is voluntary, no rights can be derived from the (insights resulting from) the market consultation and market players are understood to participate in the market consultation on a voluntary basis;
- Initiators will not provide remuneration for participation in the market consultation or for answering the questions;
- The target group for this market consultation is limited to market players who have demonstrable experience with KMC Solutions. The following parties are among those excluded from participation in this market consultation: public entities, interest groups, private individuals, the press and knowledge institutions;
- Initiators will draft an overall report of the main points of all of the individual market consultation meetings. This report will be made public (anonymous and without any commercially sensitive details);
- The primary language of the market consultation will be English;
- All communication regarding the market consultation, and submission of answers and/or reply forms, must take place via the following contact:

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